



Annual Report on Public Safety Wireless Voice and Data Communications Interoperability in the Commonwealth of Kentucky 2012

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A Report to the Interim Joint Committee on Seniors, Veterans, Military Affairs, and Public Protection and the Interim Joint Committee on State Government on progress and activity by agencies of the Commonwealth to comply with standards to achieve public safety communications interoperability.



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Purpose

The purpose of this document is to provide the annual report on the progress and activities of the commonwealth to comply with standards to achieve public safety communications interoperability to the Kentucky legislature and responsible committees.

This report centers on the efforts of the Kentucky Wireless Interoperability Executive Committee (KWIEC) as the primary body responsible for guiding the state in these endeavors as well as the Public Safety Working Group (PSWG) which serves as the engineering arm of the KWIEC.

This report is submitted as required by KRS 42.738 (1) which states:

- ❖ *KRS 42.738 (1) - The executive director shall report by September 15 annually to the Interim Joint Committee on Seniors, Veterans, Military Affairs, and Public Protection and the Interim Joint Committee on State Government on progress and activity by agencies of the Commonwealth to comply with standards to achieve public safety communications interoperability.*

This report is divided into major and minor sections with appropriate KRS references. The major areas covered include:

- ↳ The Executive Summary and summary updates on the projects and operational programs tracked by and reported to the KWIEC
- ↳ The KWIEC's background and current membership
- ↳ Groups supporting the KWIEC
- ↳ Progress made toward the KWIEC's mandates and goals
- ↳ Recommendations for the General Assembly as applicable to public safety communications

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Authority



Since its creation in 2003, the KWIEC has operated as prescribed under the provisions and authority of Kentucky Revised Statutes 11-5161, 11-5162, and 11-5163. Over the years they were reviewed and re-codified as required.

In 2009 these statutes were repealed and reenacted as KRS 42.734, KRS 42.736, and KRS 42.738 respectively as part of the cabinet reorganization project as detailed in SB-181.

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Executive Summary

Accomplishments

The accomplishments made by the state toward interoperability include:

- The upgraded Kentucky Emergency Warning System (KEWS) is functioning and all traffic has been moved to the new system.
- The Voice Mutual Aid UHF network augmentation/upgrade was completed.
- The KWIEC established a broadband workgroup to research and evaluate Kentucky's options pertaining to the national broadband network.
- The KWIEC continued to endorse OEC guidance which has reduced, but unfortunately not eliminated, deployment of stovepipe communications systems.
- 86 public safety communications projects were reviewed during 2012.

Challenges

The challenges faced by Kentucky in meeting interoperability mandates and goals fall into distinct categories which are:

- Lack of Authority afforded to the KWIEC.
- No funding provided to the KWIEC to meet its mandates.
- No direct control of funding decision (such as grants) which are awarded to the state for interoperability communications efforts.
- Lack of mandated regional communications interoperability governance committees.

Concern

The following concern has severe penalties:

- Kentucky may not meet the FCC narrowbanding mandate.

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Background

Portions of this section are reprinted from year to year with updates added as required. It is retained to provide readers unfamiliar with the KWIEC a summary of its history and the Bills and the resulting Statutes.

Three bills over the last seven years have shaped Kentucky's wireless interoperability position. These bills were House Bill 309, House Bill 226, and Senate Bill 181 and are described below.

HB 309

The 2003 Kentucky General Assembly passed HB 309 creating the Kentucky Wireless Interoperability Executive Committee (KWIEC), which is administered through the Commonwealth Office of Technology.

The committee benefits the Commonwealth by:

- ✦ Creating a nationally recognized name, the State Interoperability Executive Committee (SIEC), and structure as recommended by the Federal Communications Commission;
- ✦ Encouraging more involvement from interested agencies with the addition of local representatives from municipal and county government, police, fire, sheriff, EMS, and a 911 dispatch representative;
- ✦ Instituting an annual reporting mechanism whereby the chief information officer updates the Joint Interim Committee on Seniors, Veterans, Military Affairs, and Public Protection, and the Interim Committee on State Government;
- ✦ Addressing communications interoperability, a critically important homeland security issue;
- ✦ Advising and making recommendations to the chief information officer of the Commonwealth regarding strategic wireless initiatives, in order to achieve public safety voice and data communications interoperability.

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HB 226

In 2004, HB 226 was passed by the 2004 General Assembly and signed into law by Governor Ernie Fletcher. The Bill amended KRS 11.5162 to expand the definitions of "frequency," "interoperability," and "standards," and create definitions for "public safety shared infrastructure" and "primary wireless public safety voice or data communications systems," and excludes "911" telephone systems from the definition of "primary wireless public safety voice or data communications systems."

With the passage of HB 226, KRS 11.5163 was amended to include these requirements:

- ✎ The development and recommendation of required architecture and standards will ensure that new or upgraded Commonwealth public safety communications systems will interoperate.
- ✎ The Kentucky Wireless Interoperability Executive Committee shall be responsible for the evaluation and recommendation of all wireless communications architecture, standards, and strategies.
- ✎ All state agencies in the Commonwealth shall present all project plans for primary wireless public safety voice or data communications systems for review and recommendation by the committee, and the committee shall forward the plans to the chief information officer for final approval. Local government entities shall present project plans for primary wireless public safety voice or data communications systems for review and recommendation by the Kentucky Wireless Interoperability Executive Committee.
- ✎ The committee shall develop funding and support plans that provide for the maintenance of and technological upgrades to the public safety shared infrastructure, and shall make recommendations to the chief information officer, the Governor's Office for Policy and Management, and the General Assembly.
- ✎ The chief information officer shall examine the project plans for primary wireless public safety voice or data communications systems of state agencies and shall determine whether they meet the required architecture and standards for primary wireless public safety voice or data communications systems.

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SB 181

In 2009, SB 181 was passed by the General Assembly and signed into law by Governor Steve Beshear. With the passage of SB 181, several statutes were repealed and reenacted. As it pertains to the KWIEC the following occurred:

- ↳ KRS 11.5161 was repealed and reenacted as KRS 42.734 without change to content.
- ↳ KRS 11.5162 was repealed and reenacted as KRS 42.736 without change to content.
- ↳ KRS 11.5163 was repealed and reenacted as KRS 42.738 with the following changes.
 - The membership of the KWIEC was reduced to 20 members.
 - The 'Director of 911' position was eliminated as a voting member of the board.

Kentucky Revised Statutes

The KWIEC operates under the laws described in KRS 42.734, KRS 42.736, and KRS 42.738. These statutes are available online at:

<http://www.lrc.ky.gov/KRS/042-00/734.PDF>

<http://www.lrc.ky.gov/KRS/042-00/736.PDF>

<http://www.lrc.ky.gov/KRS/042-00/738.PDF>

Kentucky Senate and House Bills

The entire text of HB-309 is available online at:

<http://www.lrc.ky.gov/record/03rs/hb309.htm>

The entire text of HB-226 is available online at:

<http://www.lrc.ky.gov/record/04rs/hb226.htm>

The entire text of SB-181 is available online at:

<http://www.lrc.ky.gov/record/09rs/SB181.htm>

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KWIEC Membership

Of the twenty KWIEC members the majority are assigned by virtue of the position they hold within their agency while the remaining members are appointed by the Governor. KRS 42.738 (5) describes the makeup of the body and is included below.

- ❖ *KRS 42.738 (5) - The Kentucky Wireless Interoperability Executive Committee shall consist of twenty (20) members as follows:*
 - a) *A person knowledgeable in the field of wireless communications appointed by the executive director who shall serve as chair;*
 - b) *The executive director of the Office of Infrastructure Services, Commonwealth Office of Technology;*
 - c) *The executive director of Kentucky Educational Television, or the executive director's designee;*
 - d) *The chief information officer of the Transportation Cabinet;*
 - e) *The chief information officer of the Justice and Public Safety Cabinet;*
 - f) *The chief information officer of the Department of Kentucky State Police;*
 - g) *The commissioner of the Department of Fish and Wildlife Resources, or the commissioner's designee;*
 - h) *The chief information officer of the Environmental and Public Protection Cabinet;*
 - i) *The director of the Division of Emergency Management, Department of Military Affairs;*
 - j) *The executive director of the Kentucky Office of Homeland Security;*
 - k) *The chief information officer, Department for Public Health, Cabinet for Health and Family Services;*
 - l) *A representative from an institution of postsecondary education appointed by the Governor from a list of three (3) names submitted by the president of the Council on Postsecondary Education;*
 - m) *The executive director of the Center for Rural Development, or the executive director's designee;*
 - n) *A representative from a municipal government to be appointed by the Governor from a list of three (3) names submitted by the Kentucky League of Cities;*
 - o) *A representative from a county government to be appointed by the Governor from a list of three (3) names submitted by the Kentucky Association of Counties;*
 - p) *A representative from a municipal police department to be appointed by the Governor from a list of three (3) names submitted by the Kentucky Association of Chiefs of Police;*
 - q) *A representative from a local fire department to be appointed by the Governor from a list of three (3) names submitted by the Kentucky Association of Fire Chiefs;*
 - r) *A representative from a county sheriff's department to be appointed by the Governor from a list of three (3) names submitted by the Kentucky Sheriffs' Association;*
 - s) *A representative from a local Emergency Medical Services agency to be appointed by the Governor from a list of three (3) names submitted by the Kentucky Board of Emergency Medical Services; and*
 - t) *A representative from a local 911 dispatch center to be appointed by the Governor from a list of three (3) names submitted by the Kentucky Chapter of the National Emergency Number Association/Association of Public Safety Communications Officials.*
- ❖ *KRS 42.738 (6) - Appointed members of the committee shall serve for a two (2) year term. Members who serve by virtue of an office shall serve on the committee while they hold that office.*

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The KWIEC is staffed by senior decision makers or their designated representatives. These members are representing a cross section of agencies which have a stake in wireless communications operability and interoperability. This ensures that the key stakeholders have a say in the overall direction and are part of any decision affecting wireless communications interoperability across state and local agencies.

Several KWIEC members retired or accepted other positions which caused some churn in the committee. The members listed in the table below are the current membership of the 2012 KWIEC committee.

Name	Representing
Jim Barnhart	Chairperson
Terry Stephens	Commonwealth Office of Technology
Fred Engel	Kentucky Educational Television
Dan Mauer	Transportation Cabinet
Randy White	Justice Cabinet
Brad Bates	Kentucky State Police
Mike Fields	Department of Fish and Wildlife Resources
Ken Jorette	Natural Resources and Environmental Protection
Todd Ewing	Division of Emergency Management
Shelby Lawson	Kentucky Office of Homeland Security
Chris Walters	Cabinet for Health and Family Services
Doyle Friskney	Council on Postsecondary Education
Lonnie Lawson	The Center for Rural Development
Rebecca Hopkins	Kentucky League of Cities
William Marcum	Kentucky Association of Counties
Michael Daly	Kentucky Association of Chiefs of Police
Michael Gribbin	Association of Fire Chiefs
Wayne Wright	Kentucky Sheriff's Association
Joe Barrows	Kentucky Board of Emergency Medical Services
Stephen Mitchell	Kentucky National Emergency Number Association

Table 1 – KWIEC Membership

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KWIEC Meetings

- ❖ *KRS 42.738 (7) - The committee shall meet quarterly, or as often as necessary for the conduct of its business. A majority of the members shall constitute a quorum for the transaction of business. Members' designees shall have voting privileges at committee meetings.*

The Kentucky Wireless Interoperability Executive Committee meetings are scheduled once each quarter and are typically held the last week of each Quarter.

Minutes, briefing slides, this report, and other documents are available at the KWIEC website for download at:



<http://www.kwiec.ky.gov/execcommittee/minutes.htm>

For any additional information, documentation, or reports the KWIEC Facilitator should be contacted.

KWIEC Website

The website (www.kwiec.ky.gov) continues to be used as the KWIEC's primary system for presenting information to first responder agencies and the general public. Information including meetings, current events, industry specific information, frequently required documents and URLs are a single click away from the primary page.



The website also allows citizens or agencies to use an email link to request information, make inquiries, or contact the membership of the KWIEC or the PSWG through the Facilitator.

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KWIEC listserv

The listserv is a typical email list server which has been set up for individuals or agencies interested in communications interoperability. Users need only to sign up and receive approval from the administrator to begin using the listserv to communicate with others with similar interests.



The listserv is administered by the KWIEC Facilitator and is open to the public to facilitate communications interoperability communications among its members. It makes it easy for members to collaborate with one another. This system can be used to disseminate approved training documentation, whitepapers, URLs, and other information of interest to listserv members with a simple email.

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KWIEC Support

The KWIEC is supported by a Facilitator, the Public Safety Working Group, The Wireless Broadband Public Safety Workgroup, and the Funding Initiatives Workgroup. A listserv and a dedicated website are used for outreach.

KWIEC Facilitator

The KWIEC plays a vital role in guiding the public safety wireless communications and interoperability efforts, projects, and initiatives of the commonwealth. As with all committees, the KWIEC and its subcommittees and workgroups require support. To that end, the Commissioner of the Commonwealth Office of Technology has assigned a KWIEC Facilitator to provide the KWIEC with a single Point of Contact with which to work. The Facilitator will act as the primary point of contact for any issues dealing with the KWIEC and will maintain the KWIEC website and the listserv.

In addition to supporting the KWIEC, the Facilitator will assist any workgroups or subcommittees dedicated to the KWIEC. The Facilitator will act as a non-voting member of these groups to avoid any conflict of interest and will contribute to each of these groups as desired by the chair of that group.

The Facilitator will also review all projects submitted to the KWIEC and work with local and state agencies as needed. Projects which fall into the pre-approved category will be reviewed, evaluated, and approved by the Facilitator. The Facilitator will also work with granting agencies such as the Kentucky Office of Homeland Security and the Justice Department to ensure that primary wireless communications projects adhere to the KRS.

The Facilitator will plan and conduct each meeting of the KWIEC and will be available to support any members with KWIEC business when requested. The Facilitator will also work with the Governor's Office, the Legislative Research Commission, and other key agencies in support of the KWIEC.

Finally, the Facilitator will write the Annual Public Safety Report (this report) and provide it to the appropriate committees and legislative bodies. For information on this report or any KWIEC related issue please contact the KWIEC Facilitator:

Chuck Miller, PMP
charlesr.miller@ky.gov

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Public Safety Working Group (PSWG)

- ❖ *KRS 42.738 (9) - The Public Safety Working Group is hereby created for the primary purpose of fostering cooperation, planning, and development of the public safety frequency spectrum as regulated by the Federal Communications Commission, including the 700 MHz public safety band. The group shall endeavor to bring about a seamless, coordinated, and integrated public safety communications network for the safe, effective, and efficient protection of life and property. The Public Safety Working Group membership and other working group memberships deemed necessary shall be appointed by the chair of the Kentucky Wireless Interoperability Executive Committee.*

The Public Safety Working Group has been described as the Engineering Arm of the KWIEC since it is comprised of subject matter experts in wireless communications. Furthermore, the group is chaired by the state wireless communication interoperability coordinator and directly supported by the KWIEC Facilitator. When the KWIEC makes a requirement, this group is typically responsible to execute it. This group evaluates all wireless communications architecture, standards, and strategies of interest to the KWIEC and then reports on their findings and recommendations.

The Public Safety Working Group has been tasked with the following responsibilities:

- Evaluate new technology and technical solutions to planned projects.
- Using the State Communications Interoperability Plan (SCIP) as a source, begin efforts to create a long term (ten year or more) plan which makes the eventual voice and data convergence of technology a priority.
- Publish recommended minimum requirements for all radio systems.
- Maintain an inventory of State radio assets.
- Conduct an annual review of State radio infrastructures.
- Recommend projects to the KWIEC.
- Provide periodic briefings to the KWIEC as required.

The current members of the PSWG are shown in the table below.

Name	Representing	Position
Derek Nesselrode	State Wireless Interoperability Coordinator / Kentucky State Police	Chair
Bob Stephens	Office of Emergency Management	Co-Chair
Dave Barker	Department of Military Affairs	Member
Drew Chandler	Department for Public Health	Member
Jeff Mitchell	Commonwealth Office of Technology / Kentucky Emergency Warning System	Member
Ron Pannell	Louisville Metro Government	Member
Paul See	Lexington Division of Fire & Emergency Services	Member

Table 2 – PSWG Membership

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Funding Initiatives Working Group (FIWG)

- ❖ *KRS 42.738 (3) - The committee shall develop funding and support plans that provide for the maintenance of and technological upgrades to the public safety shared infrastructure, and shall make recommendations to the executive director, the Governor's Office for Policy and Management, and the General Assembly.*
- ❖ *KRS 42.736 (5) - Public safety shared infrastructure" means any component that by the nature of its function or physical characteristics can be used by multiple agencies to implement or support primary wireless public safety voice or data communications systems. This shall include but not be limited to towers, equipment shelters, radios, and other electronic equipment, backbone communications networks, and communications-related software.*
- ❖ *KRS 42.738 (9) - ... The Public Safety Working Group membership and other working group memberships deemed necessary shall be appointed by the chair of the Kentucky Wireless Interoperability Executive Committee.*
- ❖ *KRS 42.738 (10) - The committee may establish additional working groups as determined by the committee.*

The Funding Initiatives Workgroup was created to address the statutory requirements identified in KRS 42.738 (3). The KWIEC membership recognized that a dedicated workgroup was needed to address the requirement as described.

The current membership of this group is shown in the table below.



Name	Representing	Position
Brad Bates	Kentucky State Police	Chair
Lonnie Lawson	Center for Rural Development	Co-Chair
Pamela Collins	Council on Postsecondary Education	Member
Jeff Mitchell	Commonwealth Office of Technology	Member

Table 3 – FIWG Membership

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Wireless Broadband Public Safety Workgroup (WBPSWG)



For many years, Federal, State and Local Governments have discussed, debated and researched the possibilities of the creation of a national interoperable broadband network to support the public safety/first responder communities across the nation. As a result of the Middle Class Tax Relief and Job Creation Law, the first steps toward the realization of this network were set in place. A funding source was defined and The National Telecommunications and Information Administration (NTIA) created FirstNet. FirstNet is the group responsible for the planning, design, build out, and long term operations of the national 700 MHz wireless broadband data public safety network. The Federal Government has given states the right to request to opt-out of the federal plan, but if a state requests this option, they must provide a detailed network implementation plan using compliant and compatible wireless broadband network components to FirstNet for approval. If the plan is approved by FirstNet, funding would be available to the state.

The initial meeting of the FirstNet authority is scheduled to occur on September 25 2012. Their oath will be administered followed by numerous resolutions including accepting bylaws, consultations processes for state and local entities, and the initial presentations of the new network conceptual architecture.

The Kentucky Wireless Interoperability Executive Committee (KWIEC) created the Wireless Broadband Public Safety Workgroup (WBPSWG) to research the benefits of opting-in or opting-out of the National Broadband Network plan. During the initial research stage, the Wireless Broadband Public Safety Working Group will be responsible for:

- a) Presenting a preliminary briefing to the Governor's Office on federal broadband decisions and Kentucky's options
- b) Researching all aspects of the federal broadband decision and its effect on Kentucky
- c) Evaluating the pros and cons of partnering with the federal government's project versus opting-out
- d) Researching the risks and benefits of using the state-owned KEWS and/or other infrastructure resources not owned by the state
- e) Reporting their findings back to the KWIEC with a recommended course of action

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Once the research has been completed and a decision has been made, the Wireless Broadband Public Safety Working Group will be responsible for:

- a) Coordinating with the appropriate federal, state, and local agencies as needed to aid the project team
- b) Continuing to function throughout the broadband implementation project as a resource to the KWIEC and to the Project Team as required

After implementation and once the network becomes an operational asset to the Commonwealth, the WBPSWG will continue to function as a resource to the KWIEC and the agency or entity assigned with operational responsibility of the new data network.

The members of the WBPSWG will be selected to best serve Kentucky's known and expected stakeholders. Membership will consist of the Chair and at least six, but preferably all, of the positions listed below.

1. The State Wireless Interoperability Coordinator (SWIC) will serve as Chair
2. A member representing the Office of the Governor
3. A member representing Kentucky Rural Broadband interests
4. A member representing the Kentucky Emergency Warning System
5. A member representing the Kentucky Emergency Management Agency
6. A member representing Kentucky's Urban Law Enforcement Agencies
7. A member representing Kentucky's Rural Law Enforcement Agencies
8. A member representing Kentucky's Urban Fire and EMS Agencies
9. A member representing Kentucky's Rural Fire and EMS Agencies
10. A member representing Kentucky's Non/Quasi-Governmental Agencies

The current membership of this group is shown in the table below.

Name	Representing	Position
Derek Nesselrode	SWIC	Chair
Jeff Mitchell	Commonwealth Office of Technology	Vice-Chair

Table 4 – WBPSWG Membership

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KWIEC Mandates

The KWIEC mandates as described by KRS 42.738 are listed below. They have been divided by KRS subsection to properly describe the actions taken by the KWIEC in each of these areas and are expanded on in the following sections.

- I. *KRS 42.738 (1) - The executive director shall establish and implement a statewide public safety interoperability plan. This plan shall include the development of required architecture and standards that will ensure that the new or upgraded Commonwealth public safety communications systems will interoperate.*
- II. *KRS 42.738 (1) (Continued) - The Kentucky Wireless Interoperability Executive Committee shall be responsible for the evaluation of all wireless communications architecture, standards, and strategies. The executive director shall provide direction, stewardship, leadership, and general oversight of information technology and information resources.*
- III. *KRS 42.738 (1) (Continued) - The executive director shall report by September 15th annually to the Interim Joint Committee on Seniors, Veterans, Military Affairs, and Public Protection and the Interim Joint Committee on State Government on progress and activity by agencies of the Commonwealth to comply with standards to achieve public safety communications interoperability.*
- IV. *KRS 42.738 (2) – The Kentucky Wireless Interoperability Executive Committee shall serve as the advisory body for all wireless communications strategies presented by agencies of the Commonwealth and local governments. All state agencies in the Commonwealth shall present all project plans for primary wireless public safety voice or data communications systems for review and recommendation by the committee and the committee shall forward the plans to the chief information officer for final approval. Local government entities shall present project plans for primary wireless public safety voice or data communications systems for review and recommendation by the Kentucky Wireless Interoperability Executive Committee.*
- V. *KRS 42.738 (3) - The committee shall develop funding and support plans that provide for the maintenance of and technological upgrades to the public safety shared infrastructure, and shall make recommendations to the executive director, the Governor's Office for Policy and Management, and the General Assembly.*
- VI. *KRS 42.738 (4) - The executive director shall examine the project plans for primary wireless public safety voice or data communications systems of state agencies as required by subsection (2) of this section, and shall determine whether they meet the required architecture and standards for primary wireless public safety voice or data communications system.*

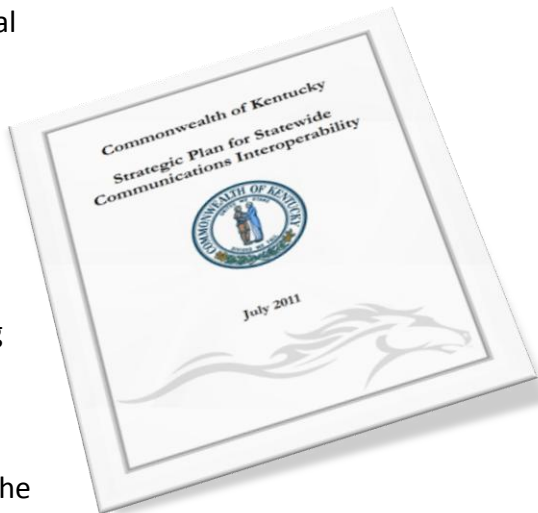
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Establish and Implement the Statewide Public Safety Interoperability Plan (SCIP)

- ❖ *KRS 42.738 (1) - The executive director shall establish and implement a statewide public safety interoperability plan. This plan shall include the development of required architecture and standards that will ensure that the new or upgraded Commonwealth public safety communications systems will interoperate.*

The Office of Emergency Communications (OEC) decided to streamline the SCIP, eliminate much of the unneeded information, and to consolidate it with the broadband plan and address next generation technology. The OEC change was scheduled to occur in August; one month after the commonwealth's review. Completing the annual review only to revise it two months later simply did not make sense so the decision was made to align the OEC and state review cycles to prevent this problem from recurring. Starting in 2012 Kentucky will schedule its annual update/review cycle for October/December to allow all time for the KWIEC to take any changes or course corrections into account.

The July 2011 revision of the SCIP is the latest approved revision. Several changes/updates will be summarized in the planned update in October. Among them will be updates including the loss of the UASAI status of Louisville, the planned National Broadband Data Network, upgrades to the Kentucky Emergency Warning System's infrastructure, and the completion of the UHF Mutual Aid channel augmentation.



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Evaluation of Wireless Communications Architecture, Standards and Strategies

- ❖ **KRS 42.738 (1) (Continued)** - *The Kentucky Wireless Interoperability Executive Committee shall be responsible for the evaluation of all wireless communications architecture, standards, and strategies. The executive director shall provide direction, stewardship, leadership, and general oversight of information technology and information resources.*

The KWIEC endorsed the Office of Emergency Communications' guidance for public safety communications which promotes open standards and interoperability. The wireless communications standards shown below are used to evaluate any proposed deployment strategy and wireless architecture submitted to the KWIEC.

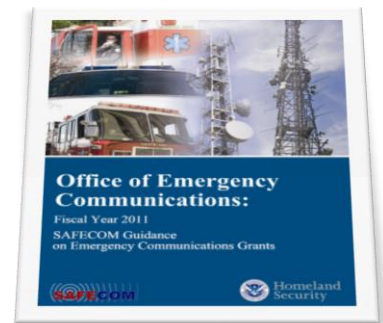
Standards

Wireless Voice

- Conventional Analog voice systems
- Digital P-25 voice systems

Wireless Data

- The state's IP MobileNet standard
- The new LTE national standard



There are few exceptions to the rule of avoiding the deployment of proprietary systems. Among them are where agencies:

- have approvals prior to endorsing the OEC standard
- request minor augmentations to a fully deployed system
- require replacement equipment supporting a previously approved system

The Public Safety Workgroup and now, the Wireless Broadband Public Safety Workgroup, are tasked with evaluating new and existing systems and making recommendations to the KWIEC.

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Report on SAFECOM Compliance

Kentucky continues to use the SAFECOM Interoperability Continuum to measure its interoperability level as desired by the Office of Emergency Communications. There is no right or wrong, and each state is free to choose what works best for them on this continuum. Over the last several years, Kentucky continues to fall as the diagram below shows. Of course, as the commonwealth's needs change, so too will our position on the continuum.

This year the Technology circle has moved partially into the 'Standards-Based System' to show Kentucky's progress in limiting the deployment of new proprietary or stove-pipe communications systems. This was accomplished by the KWIEC endorsing the OEC requirements of deploying only conventional analog or P-25 digital voice systems. All KWIEC project reviews were subsequently completed against this requirement.

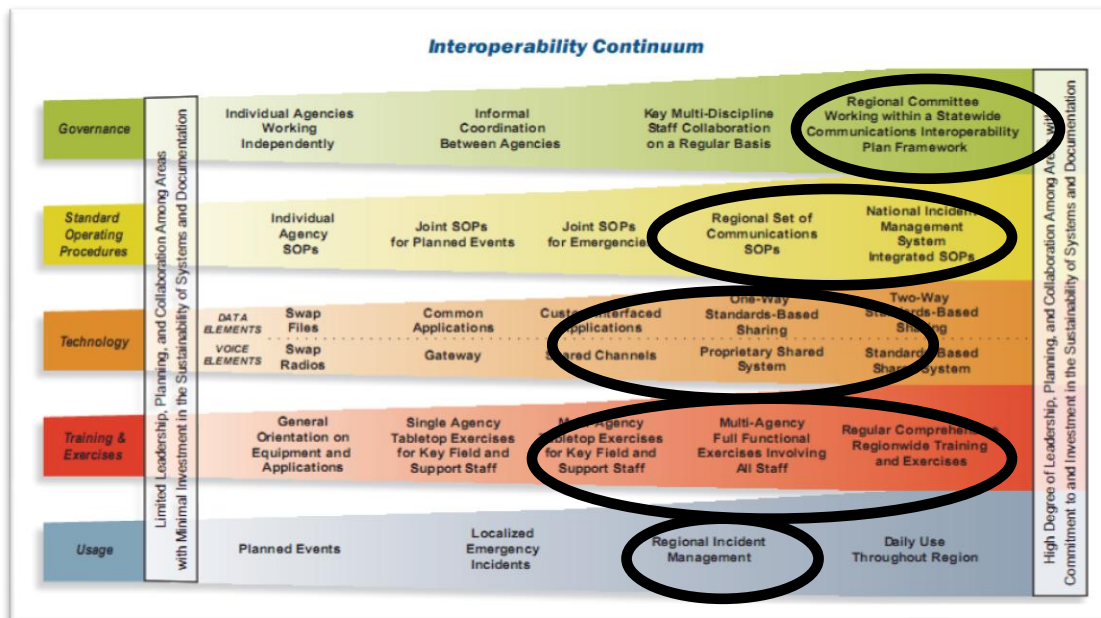


Figure 1 – Kentucky's Interoperability Continuum

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Summary Report using the Interoperability Continuum

Governance

- The KWIEC is the statewide governance committee which works with regional agencies such as the Kentucky State Police and the Department of Military Affairs regional Posts, Armories, and Depots. The makeup of the KWIEC also has regional representation including the association of Sheriffs, Fire, and others.

Standard Operating Procedures (SOPs)

- Depending on the agency and incident, Kentucky covers both Regional SOPs and National Incident Management System (NIMS) SOPs. Kentucky uses and trains its first responders on NIMS recommendations and requirements and regional SOPs are written to comply with NIMS requirements.
- Kentucky has also finalized its state Field Operations Guide (KYFOG) modeled on the national guide.

Technology

- Kentucky implemented a network of “Shared Channels” for its means of interoperable voice communications through its Voice Mutual Aid Program.
- Kentucky also endorses the OEC requirements of conventional analog or P-25 digital systems for public safety voice communications. This is slowly moving Kentucky toward a “Standards Based” voice system as new equipment is deployed.
- Kentucky implemented a “Proprietary Shared System” for its means of interoperable data communications through its Mobile Data Network.
- The national broadband data network will eventually become the primary method of mobile data transfer for first responders and the current Mobile Data Network will augment the national network.

Training and Exercise

- Kentucky conducts exercises in support of the Kentucky Derby annually. Additionally several local and regional exercises are conducted by other agencies without state involvement.

Usage

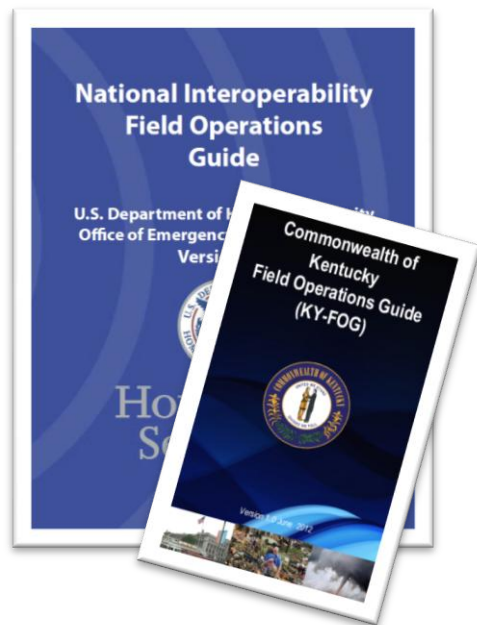
- Regional incident management is used and exercised in Kentucky. This aligns well with our voice interoperability system which uses KSP regional monitoring.

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Kentucky Field Operations Guide (KY-FOG)

Kentucky is in the process of publishing the Kentucky Field Operations Guide (KY-FOG) modeled on the National Interoperability Field Operations Guide (NI-FOG). Kentucky's guide will be an asset for first responders since it provides over 100 pages of detailed information needed for incident management.

The KY-FOG will be especially helpful when used in support of emergency operations, field exercises, and other similar events. It puts information such as contact numbers, responsibilities checklists, repeater locations, mutual aid frequencies, shared assets instructions, and other information uniquely applicable to Kentucky's first responders at their fingertips.



Communications Unit Leader (COM-L) Training

Kentucky's Division of Emergency Management scheduled two Communications Unit Leader (COML) classes in 2012. Training is open to local, regional, state and federal cross disciplinary emergency response professionals and coordination/support personnel with a communication background.

Communications Exercises

Kentucky continues to schedule and conduct several local, regional, and state communications exercises each year. For questions concerning training or exercises please contact:

COL Bob Stephens
Communications Supervisor
bob.stephens2@us.army.mil

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Primary Wireless Communications – Review of Project Plans

- ❖ *KRS 42.738 (2) – The Kentucky Wireless Interoperability Executive Committee shall serve as the advisory body for all wireless communications strategies presented by agencies of the Commonwealth and local governments. All state agencies in the Commonwealth shall present all project plans for primary wireless public safety voice or data communications systems for review and recommendation by the committee and the committee shall forward the plans to the chief information officer for final approval. Local government entities shall present project plans for primary wireless public safety voice or data communications systems for review and recommendation by the Kentucky Wireless Interoperability Executive Committee.*
- ❖ *KRS 42.738 (4) - The executive director shall examine the project plans for primary wireless public safety voice or data communications systems of state agencies as required by subsection (2) of this section, and shall determine whether they meet the required architecture and standards for primary wireless public safety voice or data communications system.*

The public safety communications project assessment process for the KWIEC is shown in the flowchart below. Where possible the process has been streamlined and simplified and will continue to be reviewed and revised as needed. As described in previous years, the KWIEC has and expects to continue to endorse the public safety communications requirements expressed by the Federal Office of Emergency Communications (OEC).

Those agencies desiring grant funding from the OEC must meet their requirement to deploy only conventional analog or digital P-25 systems. Proprietary radios are not considered for funding unless compelling reasons can be given. As of this writing for the 2012 calendar year, 86 projects have been or are in the process of being reviewed.

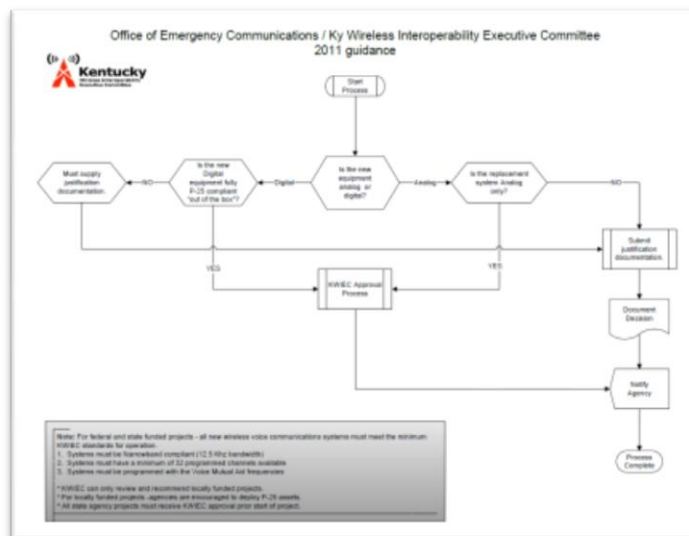


Figure 2 – KWIEC Communications Project Assessment Process

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The KWIEC Facilitator is tasked to review and process all projects submitted to the KWIEC against the OEC, KWIEC, and other state requirements as applicable. The Facilitator works with local and state agencies to ensure that the projects submitted for review are correct and meet the above requirements.

Local Agency Project Assessments

Local agencies submit a single page form which will continue to be used and updated annually to comply with the current federal and state guidance and requirements.

Local Agency projects which meet the OEC and KWIEC requirements are processed entirely by the Facilitator. Projects which require waivers or are not on the preapproved list are reviewed by the PSWG. The current preapproved list is:

- Non-primary wireless systems
- Simple augmentations to an existing and approved network
- Mobile Data projects
- Analog Voice upgrades
- P-25 Digital Voice upgrades

A screenshot of a web-based form titled "KWIEC Project Assessment - Summary Information for Agency Use 2012". The form is divided into several sections: "Project Information" (Agency Name, Project Title, Project Manager, etc.), "Project Description" (Project Purpose, Project Justification, etc.), and "Program Funding & Estimated Performance" (Funding Source, Estimated Cost, etc.). The form includes various dropdown menus, checkboxes, and text input fields.

State Agency Project Assessments

State agencies continue to use a multipage form to explain their project. The form is modeled after a business case analysis and requires state agencies to justify and fully explain their projects before they will be approved.

All state agency communications projects are reviewed by the KWIEC Chairperson. The KWIEC Chairperson is the approving authority for state communications interoperability projects.

Two overlapping pages of a printed form titled "Assessment of Project Plans for Primary Wireless Public Safety Voice and/or Data Communications". The top page shows sections for "Project Information" and "Project Description". The bottom page shows sections for "Project Justification" and "Project Implementation". The form includes various text input fields, checkboxes, and a signature line at the bottom.

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Funding and Support of the Public Safety Shared Infrastructure

- ❖ *KRS 42.738 (3) - The committee shall develop funding and support plans that provide for the maintenance of and technological upgrades to the public safety shared infrastructure, and shall make recommendations to the executive director, the Governor's Office for Policy and Management, and the General Assembly.*

Now that upgrades to the KEWS network are complete, the system will require ongoing maintenance and support. As a necessary first step in this long term process, funding has been requested to galvanize or repaint nearly 150 towers in the KEWS network.



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Report on Progress and Activities to Comply with Standards

- ❖ *KRS 42.738 (1) (Continued) - The executive director shall report by September 15th annually to the Interim Joint Committee on Seniors, Veterans, Military Affairs, and Public Protection and the Interim Joint Committee on State Government on progress and activity by agencies of the Commonwealth to comply with standards to achieve public safety communications interoperability.*

Compliance with Narrowbanding Deadline

There are just over 100 days remaining until the FCC's mandatory narrowbanding cutoff date of January 1, 2013. As reported in previous years, most agencies rely on grants and other funding streams to pay for these Federal unfunded mandates. Federal funds available to agencies this year have again been reduced and collectively are less than half of what was available in 2011.

"Narrowbanding" refers to the FCC mandate that on or before January 1, 2013 all licensees in the 150–174 MHz VHF and portions of the 421–512 MHz UHF spectrum must reduce their channel utilization from 25 KHz to 12.5 KHz per channel.

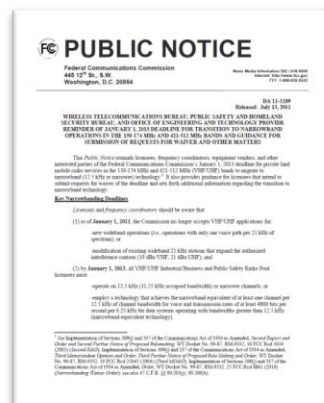
Many first responders have expressed concern and confusion over the FCC's hardline stand on the narrowbanding date. When compared with their digital television deadline, which was extended more than once, it's hard to imagine how citizens threatened with the loss of television can compare to the loss of communications capabilities for public safety agencies. The FCC's "Get Tough" policy on narrowbanding may potentially cause life threatening situations for our first responders as well as other unanticipated issues.



Federal Communications Commission - Narrowbanding Waiver Requests

The FCC published guidance for license holders wishing to request a waiver on meeting the narrowbanding deadline. Within this guidance they indicate that a lack of funding may not be considered a compelling reason for waiver approval.

Several other states and municipalities have submitted waivers, but unfortunately there do not appear to be any license holders in Kentucky that have done so as of this writing.



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The FCC has indicated that they will be upholding their mandated timeframe and may impose penalties up to and including large fines and/or loss of license for those not complying with this deadline.

Listing of FCC Fixed Licenses by County

A listing of all the fixed licenses for Kentucky in the FCC database as of this printing is included below. It should be noted that this licensing data is only as accurate as what was reported to the FCC from the license holders.

In 2011, it was reported that just over half of its fixed licenses were amended or revised to narrowband. For 2012, it can be seen that Kentucky still has over 30% of its fixed licenses permitted for wideband only. While some of the license holders may already be in compliance and simply need to update their license designation, it cannot be assumed that this would be more than a few percent of the total. Based on the reported data, it may be estimated that approximate 25% of the licenses will be noncompliant on January 1, 2013.

The listing of Kentucky's fixed transmitters reported to the FCC is shown below on a county level and is divided out by call sign and number of fixed transmitters.

COUNTY	# 12.5 kHz	% 12.5 kHz	# 12.5 kHz / 25 kHz	% 12.5 kHz / 25 kHz	# 25 kHz	% 25 kHz	Total
Total	706	32.55%	779	35.92%	684	31.54%	2169
ADAIR	2	12.50%	5	31.25%	9	56.25%	16
ALLEN	7	63.64%	3	27.27%	1	9.09%	11
ANDERSON	3	23.08%	5	38.46%	5	38.46%	13
BALLARD	2	18.18%	8	72.73%	1	9.09%	11
BARREN	8	32.00%	9	36.00%	8	32.00%	25
BATH	9	64.29%	4	28.57%	1	7.14%	14
BELL	11	33.33%	12	36.36%	10	30.30%	33
BOONE	16	66.67%	4	16.67%	4	16.67%	24
BOURBON	7	46.67%	7	46.67%	1	6.67%	15
BOYD	14	37.84%	12	32.43%	11	29.73%	37
BOYLE	5	38.46%	4	30.77%	4	30.77%	13
BRACKEN	2	33.33%	1	16.67%	3	50.00%	6
BREATHITT	2	20.00%	5	50.00%	3	30.00%	10
BRECKINRIDGE	6	37.50%	2	12.50%	8	50.00%	16
BULLITT	10	43.48%	6	26.09%	7	30.43%	23
BUTLER	2	20.00%	4	40.00%	4	40.00%	10

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CALDWELL	3	25.00%	5	41.67%	4	33.33%	12
CALLOWAY	9	34.62%	11	42.31%	6	23.08%	26
CAMPBELL	19	55.88%	5	14.71%	10	29.41%	34
CARLISLE	5	55.56%	0	0.00%	4	44.44%	9
CARROLL	8	50.00%	6	37.50%	2	12.50%	16
CARTER	7	30.43%	11	47.83%	5	21.74%	23
CASEY	10	50.00%	7	35.00%	3	15.00%	20
CHRISTIAN	5	13.89%	3	8.33%	28	77.78%	36
CLARK	8	53.33%	6	40.00%	1	6.67%	15
CLAY	7	30.43%	7	30.43%	9	39.13%	23
CLINTON	2	66.67%	0	0.00%	1	33.33%	3
CRITTENDEN	5	50.00%	3	30.00%	2	20.00%	10
CUMBERLAND	6	37.50%	5	31.25%	5	31.25%	16
DAVIESS	7	43.75%	5	31.25%	4	25.00%	16
EDMONSON	2	28.57%	2	28.57%	3	42.86%	7
ELLIOTT	2	25.00%	5	62.50%	1	12.50%	8
ESTILL	1	12.50%	6	75.00%	1	12.50%	8
FAYETTE	11	26.19%	15	35.71%	16	38.10%	42
FLEMING	5	35.71%	7	50.00%	2	14.29%	14
FLOYD	7	25.93%	11	40.74%	9	33.33%	27
FRANKLIN	10	32.26%	11	35.48%	10	32.26%	31
FULTON	2	13.33%	12	80.00%	1	6.67%	15
GALLATIN	1	25.00%	3	75.00%	0	0.00%	4
GARRARD	1	14.29%	3	42.86%	3	42.86%	7
GRANT	3	18.75%	10	62.50%	3	18.75%	16
GRAVES	10	31.25%	12	37.50%	10	31.25%	32
GRAYSON	0	0.00%	8	66.67%	4	33.33%	12
GREEN	5	62.50%	3	37.50%	0	0.00%	8
GREENUP	12	32.43%	12	32.43%	13	35.14%	37
HANCOCK	2	40.00%	0	0.00%	3	60.00%	5
HARDIN	14	43.75%	11	34.38%	7	21.88%	32
HARLAN	8	22.86%	12	34.29%	15	42.86%	35
HARRISON	4	23.53%	11	64.71%	2	11.76%	17
HART	3	21.43%	8	57.14%	3	21.43%	14
HENDERSON	7	24.14%	15	51.72%	7	24.14%	29
HENRY	3	25.00%	4	33.33%	5	41.67%	12
HICKMAN	4	33.33%	4	33.33%	4	33.33%	12
HOPKINS	12	34.29%	11	31.43%	12	34.29%	35
JACKSON	6	42.86%	5	35.71%	3	21.43%	14
JEFFERSON	15	15.63%	25	26.04%	56	58.33%	96
JESSAMINE	0	0.00%	11	64.71%	6	35.29%	17
JOHNSON	3	15.00%	6	30.00%	11	55.00%	20
KENTON	25	41.67%	20	33.33%	15	25.00%	60
KNOTT	1	7.14%	3	21.43%	10	71.43%	14
KNOX	6	31.58%	6	31.58%	7	36.84%	19
LARUE	9	90.00%	0	0.00%	1	10.00%	10
LAUREL	11	35.48%	12	38.71%	8	25.81%	31
LAWRENCE	9	64.29%	4	28.57%	1	7.14%	14
LEE	4	57.14%	2	28.57%	1	14.29%	7
LESLIE	4	30.77%	5	38.46%	4	30.77%	13

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LETCHER	1	7.14%	6	42.86%	7	50.00%	14
LEWIS	3	23.08%	10	76.92%	0	0.00%	13
LINCOLN	3	30.00%	5	50.00%	2	20.00%	10
LIVINGSTON	2	12.50%	9	56.25%	5	31.25%	16
LOGAN	7	35.00%	3	15.00%	10	50.00%	20
LYON	2	14.29%	6	42.86%	6	42.86%	14
MADISON	8	29.63%	5	18.52%	14	51.85%	27
MAGOFFIN	2	20.00%	6	60.00%	2	20.00%	10
MARION	4	36.36%	4	36.36%	3	27.27%	11
MARSHALL	5	20.00%	11	44.00%	9	36.00%	25
MARTIN	2	20.00%	4	40.00%	4	40.00%	10
MASON	1	10.00%	6	60.00%	3	30.00%	10
MCCRACKEN	15	51.72%	6	20.69%	8	27.59%	29
MCCREARY	1	9.09%	2	18.18%	8	72.73%	11
MCLEAN	3	37.50%	1	12.50%	4	50.00%	8
MEADE	3	18.75%	8	50.00%	5	31.25%	16
MENIFEE	8	66.67%	4	33.33%	0	0.00%	12
MERCER	6	46.15%	7	53.85%	0	0.00%	13
METCALFE	2	20.00%	3	30.00%	5	50.00%	10
MONROE	5	50.00%	2	20.00%	3	30.00%	10
MONTGOMERY	7	46.67%	7	46.67%	1	6.67%	15
MORGAN	4	33.33%	6	50.00%	2	16.67%	12
MUHLENBERG	7	22.58%	19	61.29%	5	16.13%	31
NELSON	2	14.29%	3	21.43%	9	64.29%	14
NICHOLAS	2	50.00%	0	0.00%	2	50.00%	4
Not Specified	0	0.00%	1	1	0	0.00%	1
OHIO	13	52.00%	10	40.00%	2	8.00%	25
OLDHAM	3	18.75%	9	56.25%	4	25.00%	16
OWEN	7	38.89%	8	44.44%	3	16.67%	18
OWSLEY	6	54.55%	3	27.27%	2	18.18%	11
PENDLETON	3	33.33%	2	22.22%	4	44.44%	9
PERRY	7	26.92%	8	30.77%	11	42.31%	26
PIKE	19	41.30%	17	36.96%	10	21.74%	46
POWELL	6	54.55%	5	45.45%	0	0.00%	11
PULASKI	9	20.45%	22	50.00%	13	29.55%	44
ROBERTSON	1	33.33%	0	0.00%	2	66.67%	3
ROCKCASTLE	8	53.33%	5	33.33%	2	13.33%	15
ROWAN	7	33.33%	6	28.57%	8	38.10%	21
RUSSELL	2	22.22%	1	11.11%	6	66.67%	9
SCOTT	3	23.08%	5	38.46%	5	38.46%	13
SHELBY	12	50.00%	8	33.33%	4	16.67%	24
SIMPSON	3	27.27%	2	18.18%	6	54.55%	11
SPENCER	0	0.00%	3	75.00%	1	25.00%	4
TAYLOR	2	16.67%	2	16.67%	8	66.67%	12
TODD	7	50.00%	6	42.86%	1	7.14%	14
TRIGG	3	18.75%	6	37.50%	7	43.75%	16
TRIMBLE	3	50.00%	2	33.33%	1	16.67%	6
UNION	5	29.41%	2	11.76%	10	58.82%	17
WARREN	6	24.00%	3	12.00%	16	64.00%	25
WASHINGTON	2	20.00%	7	70.00%	1	10.00%	10

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WAYNE	5	29.41%	9	52.94%	3	17.65%	17
WEBSTER	5	35.71%	6	42.86%	3	21.43%	14
WHITLEY	11	34.38%	8	25.00%	13	40.63%	32
WOLFE	1	20.00%	4	80.00%	0	0.00%	5
WOODFORD	13	68.42%	6	31.58%	0	0.00%	19

Table 5 – FCC Licenses by County

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Report on Progress and Activities

- ❖ *KRS 42.738 (1) (Continued) - The executive director shall report by September 15th annually to the Interim Joint Committee on Seniors, Veterans, Military Affairs, and Public Protection and the Interim Joint Committee on State Government on progress and activity by agencies of the Commonwealth to comply with standards to achieve public safety communications interoperability.*

Kentucky has several major projects and activities which shall be reported on in the following pages.

- Data Messaging Interoperability using the KyWINS Messenger application
- The Digital Microwave Infrastructure (KEWS) Upgrade
- Voice Interoperability using the Voice Mutual Aid Network
- Mobile Data Interoperability using the existing low speed IP MobileNet system
- Mobile Data Interoperability using the new National Broadband Network

Data Messaging Interoperability: KyWINS and KyWINS Messenger

The Kentucky Wireless Information Network Service (KyWINS) Messenger software is still available to first responders. Originally planned as a means of first responders to rapidly communicate with each other in field-to-field, base-to-base, or base-to-field situations, it proved to be too data intensive for the bandwidth available to the average mobile user. Additionally, the existing mobile packages typically have an equivalent but light package already installed, so it can be understood why this software has fallen into disuse.



The application can still be used where bandwidth is not a concern such as in the base-to-base environment and may be revised once the national broadband data network is a reality.

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The Digital Microwave Infrastructure (KEWS) Upgrade



The \$47 Million multi-year project to upgrade the Kentucky Emergency Warning System (KEWS) is nearly complete. New digital equipment has been installed throughout the network and all of the circuits have been transferred to the new IP-based digital microwave infrastructure.

In addition to the active traffic component upgrades of the KEWS network, the infrastructure has also been significantly upgraded. Towers were strengthened, waveguides and dishes were replaced, grounding and battery backup systems were upgraded, emergency backup generators were installed, and fencing and shelters have been replaced to increase security and available space at many compounds.

The new KEWS network passed its final performance test on July 16, 2012, and the last remnants of the 30 year old analog equipment were decommissioned and removed.

The new statewide system is designed for traffic protection with equipment redundancy, loop/path redundancy, auto-rerouting, and built-in self healing.

If the new system is as successful as the original KEWS system, it should effectively serve the current and future needs of the commonwealth for many years.

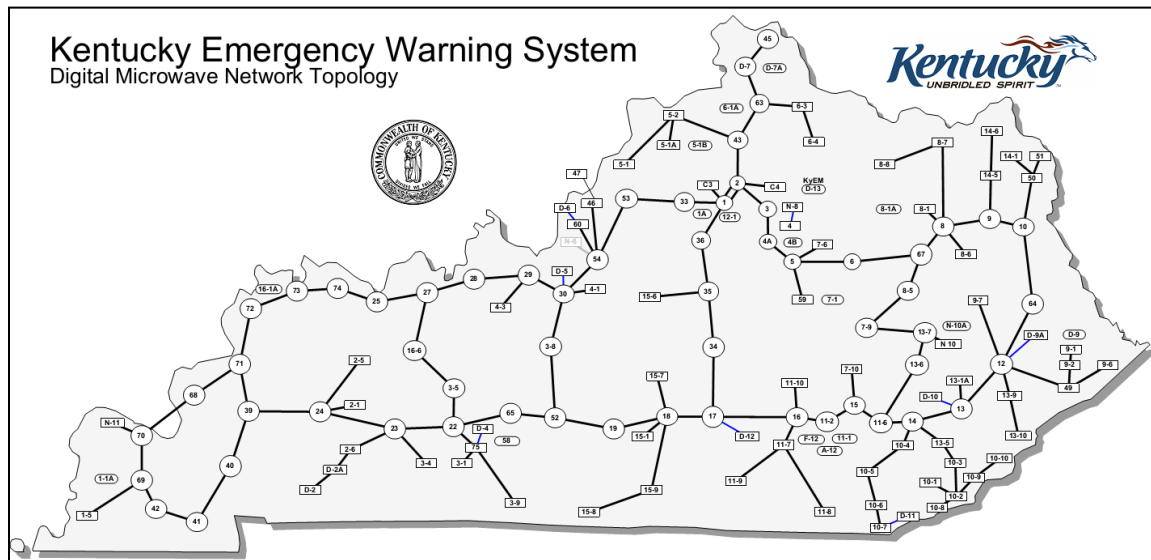


Figure 3 – New KEWS Network

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Voice Interoperability: Voice Mutual Aid

Public Safety Agencies are typically deploying OEC compliant systems, and many of the interoperability issues can be resolved when partnering agencies following these requirements. Unfortunately, far too many agencies have deployed stovepipe systems which are an interoperability obstacle. To combat this problem Kentucky has established the Mutual Aid and Interoperability Program which uses nationally reserved shared channels to provide disparate systems a means of interoperability.

The project to deploy additional UHF channels has now been completed and is available to first responder agencies that join the program.

These channels are regional in nature and are connected back to the Kentucky State Police posts (shown below). They are available to all public safety units in the region. As can be imagined, during any major disaster or large problem situation these shared channels quickly become saturated. Agencies with conventional analog or P-25 digital systems would continue to have the ability to communicate using their existing operational channels shared with other partnering agencies. Those agencies with proprietary digital systems and repeaters would be isolated and forced to rely only on the shared channels or partners with the same proprietary equipment. This is one of the major reasons that proprietary digital systems are discouraged.

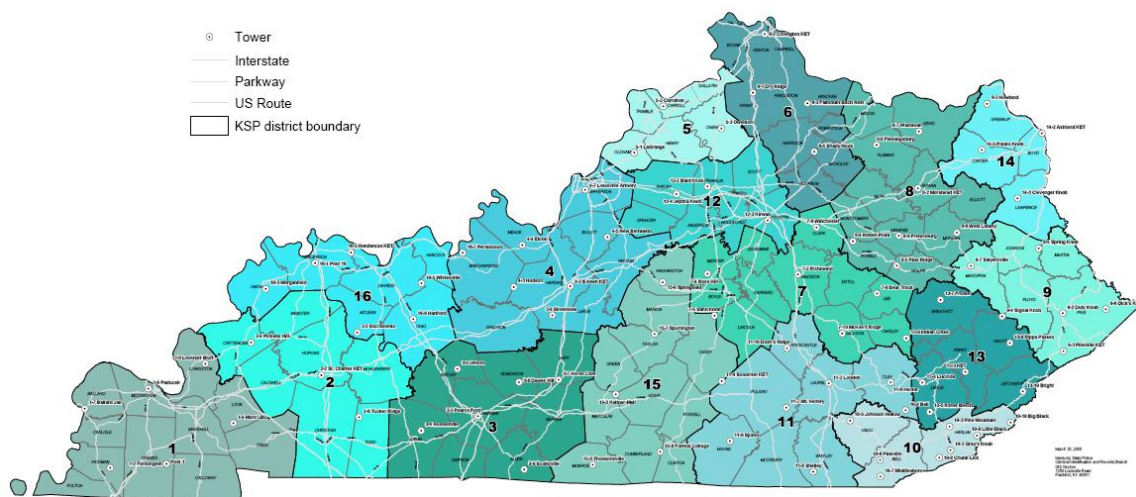


Figure 4 – Voice Mutual Aid/KSP Regions

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Mobile Data Interoperability: IP MobileNet

The statewide IP MobileNet system serves as Kentucky's low speed mobile data



network. It was designed for first responders whose primary requirement was short text based transfers to and from base or other mobile users. With a maximum throughput of 19.2 kbps per channel, it is of little use to first responders needing high speed data transfers, but it is performing as designed and continues to be useful for its intended purpose.

It also works well when serving a handful of users; however urban areas typically have several dozen users competing for this limited bandwidth. For this reason, many first responders in populated areas feel that this low speed system has been outgrown. Those agencies have opted to replace their low speed mobile data modems with commercial cellular air cards to take advantage of the increased bandwidth offered by these carriers. While understandable, this trend is concerning since our first responders are relying on a system which does not prioritize public safety traffic over other customers. Since cellular systems tend to become overloaded at the first sign of an emergency, it can easily be concluded that when these systems are needed most, they will likely be unavailable. For those with the foresight to keep their IP MobileNet modems as backups, they will at least have the advantage of having a failover device when their cellular data network becomes overloaded.

Upgrading the existing Mobile Data system to a medium speed data system would require replacement of both fixed and mobile equipment to realize increased data rates, but it is a viable option. Current technology allows for more efficient channel use than was possible just a few years ago. Data rates of up to 64 kbps per channel are available now, and the low speed data issues cited above could be mitigated with nominal equipment upgrades to the Mobile Data network. Additionally, channel binding could be used to increase the data rates where needed.

Channel Binding is a process where two or more channels can be added together to increase the total available bandwidth.

For example, binding four 64 kbps channels together can provide an aggregate data rate of 256 kbps.

Depending on location, the high speed national broadband data network will not be available for at least five years, but recent estimates by industry analysts have put this number closer to a decade or more for full deployment. Once full deployment of the national broadband network is realized, the existing IP MobileNet system may become

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obsolete, but it is expected that it will continue to be useful in rural and other underserved broadband areas even after deployment of the broadband network.

The Wireless Broadband Public Safety Workgroup is currently researching several upgrade options as well as opting into the national broadband network.

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Mobile Data Interoperability – The New National Broadband Network

Nationwide Public Safety Broadband

In February 2012, Congress enacted The Middle Class Tax Relief and Job Creation Act of 2012 which contained provisions to create a nationwide interoperable broadband data network for first responders. It will be deployed and operated based on a single national network architecture concept. The Act provides \$7 billion in funding towards deployment of this network, as well as \$135 million for a new State and Local Implementation Grant Program administered by NTIA to support State, regional, tribal and local jurisdictions' efforts to plan and work with FirstNet to ensure the network meets their wireless public safety communications needs.

Governance

The new "First Responder Network Authority" (FirstNet) was created as an independent authority within NTIA to act as the governance body for this network. FirstNet will hold the spectrum license for the entire network, and is charged with taking "all actions necessary" to build, deploy, and operate the network, in consultation with Federal, State, tribal and local public safety entities, and other key stakeholders. The Board of Directors for the First Responder Network Authority (FirstNet) has been appointed and is listed below.

Name	Representing
Tim Bryan	CEO, National Rural Telecommunications Cooperative
Charles Dowd	Deputy Chief, New York City Police Department
F. Craig Farrill	Wireless telecommunications executive
Paul Fitzgerald	Sheriff, Story County, Iowa
Samuel Ginn	Telecommunications executive
Jeffrey Johnson	Fire Chief (retired); former Chair, State Interoperability Council, State of Oregon; CEO, Western Fire Chiefs Association
William Keever	Telecommunications executive (retired)
Kevin McGinnis	Chief/CEO, North East Mobile Health Services
Ed Reynolds	Telecommunications executive (retired)
Susan Swenson	Telecommunications/technology executive
Teri Takai	Government information technology expert; former CIO, states of Michigan and California
Wellington Webb	Founder, Webb Group International; former Mayor, Denver, Colorado

Table 6 – FirstNet Members

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Kentucky Broadband Planning

On March 29, 2012, the KWIEC created the Wireless Broadband Public Safety Workgroup (WBPSWG). The Chair and Vice Chair were identified and tasked with building a team of subject matter experts and key stakeholders to assist with research, planning, and deployment of a new broadband network in KY. The SWIC will serve as chair of the working group and acts as the state's primary point of contact for working with FirstNet. Coordination with the state CIO, Governor's Office, and the KWIEC will be critical to success during the planning phase of the network.

The NTIA has released grant information for the planning phase and indicated that \$135 million will be available for outreach and planning only. A 20% state match is currently being required, however an "in kind, or soft" match may be allowed. The applications for funding will be available in the first quarter of 2013 to the 56 states and territories.

Questions about the development of the Public Safety Broadband Data Network can be directed to:

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KWIEC GOALS

Typically the KWIEC adopts goals to work toward each year where KWIEC members, the Public Safety Working Group, or the KWIEC Facilitator are tasked to monitor, evaluate, or complete them. Along with the KWIEC mandates, progress toward these goals is briefed at each quarterly meeting. Not all goals are fully met each year, but as with all goals, working toward completing them is beneficial.

↳ **Complete the upgrade of the KEWS Network**

- This goal is complete.

↳ **Encourage/push for a public safety broadband data pilot project**

- With the decision to create a national broadband network this goal is no longer applicable.

↳ **Establish trained regional interoperability groups**

- This goal cannot be realized without funding.

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Legislative Issues concerning Communications Interoperability

This section summarizes issues which must be brought to the attention of the legislature and its committees responsible for public safety.



The challenges that Kentucky has reported over the last several years continue today. While important progress is being made, there are a few root problems which continue to hamper the efforts of the KWIEC.

- Funding - The KWIEC is tasked with an incredibly important function and yet it has no funding. Each member of the KWIEC, its workgroups, and the Facilitator have other full time job requirements. This is an extra duty for each of the members involved which limit the time and resources available to accomplish the KWIEC mandates and goals.
- Authority – While the KWIEC has full approval authority for all state level wireless communications interoperability projects, it can only review and make recommendations to local agencies. All state level voice and data systems are interoperable regardless of location while at a local level, the deployment of incompatible systems has led to a hodgepodge network which continues the infamous “islands of communications” problem warned about in years past.

The KWIEC needs the authority and the funding to establish and govern trained regional interoperability groups. These groups would be responsible for complying with OEC and KWIEC requirements and have the authority to ensure all local agencies comply as well. This group would also be responsible for ensuring all funds (grant and local) are compliant with interoperability standards. State interoperability communications efforts should be driven and managed by the state or its agents. Local agencies should be provided with a system and equipment that simply works with other first responders and not given communication grant funding directly which all too often is used for proprietary equipment.

Narrowbanding concern

Assuming the information presented in the FCC license table is accurate, it clearly shows that Kentucky will not meet the timeline required in the FCC’s narrowbanding deadline. This may be due to a failure of the agency to update their license, or it may actually be that the agency has not completed upgrading to narrowband equipment. As of this report, there have been no confirmed narrowband waivers submitted by any agency in

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Kentucky reported to the KWIEC or to the Commonwealth's frequency manager. If this is accurate, it can be expected that several Kentucky first responders will be required to stop using their equipment by January 1, 2013, or they will face huge fines.

Conclusion

A team concentrating its efforts on a common goal is stronger than a group of individuals each aspiring to the same goal. Just as a coach can focus the efforts of a team, the KWIEC should be allowed to do the same for Kentucky. Given the funding and authority, the KWIEC could focus the often unrelated and counterproductive efforts of numerous individual agencies into a single statewide effort which would benefit all first responders.

In 2012 the Commonwealth completed two major state interoperability initiatives; the Kentucky Emergency Warning System (KEWS) upgrade, and the Mutual Aid and Interoperability Channel augmentation. The KEWS upgrade provides a highly reliable backbone for public safety communications traffic and the Mutual Aid augmentation adds several common channels to the pool of available multi-user dedicated interoperability channels across the Commonwealth.

The KWIEC also established the Wireless Broadband Public Safety Workgroup within weeks of the federal announcement to create a National Broadband Data Network. This KWIEC established this group to evaluate any opportunities available to Kentucky and to ensure that all options are considered.

The KWIEC was greatly responsible for the success of these initiatives and will continue to provide a valuable platform for disseminating information and coordinating efforts to maximize state communications voice and data interoperability efforts. Continued support of the KWIEC by the legislature is critical and continued funding for statewide interoperability initiatives will be crucial to the Commonwealth's ultimate goals of providing true statewide communications interoperability to first responders.

This document will be available for download as a PDF file from the KWIEC website located at www.kwiec.ky.gov. For additional information, questions, or comments concerning this document please contact the KWIEC Chairperson Jim.Barnhart@ky.gov or the KWIEC Facilitator CharlesR.Miller@ky.gov via email.

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